REMARKS

Claims 1-20 are pending in the application. Claims 1, 4, 10, 11, 14, and 20 have been amended by the present amendment. The amendments are fully supported by the specification as originally filed.

Applicants' claimed invention is directed to a semiconductor package with a ground structure, and a lead frame. The ground structure includes first ground portions formed on lateral sides of tie bars of the lead frame. As recited in claims 1 and 11, the first ground portions are separate from each other, and a hollow-out area is formed between the first ground portion and one of the tie bars. Further, the first ground portion is electrically connected by bonding wires to a chip mounted on a die pad.

For example, as shown in FIG. 1, a first ground portion 20 includes a ground area 20a connected to a tie bar 12, and a connection area 20b connected to a die pad 11 (see specification at page 8, third paragraph). Alternatively, as shown in FIG. 4B, the first ground portion 20 only includes the ground area 20a connected to the tie bar 12, and is suspended without being connected to the die pad (see page 10, second paragraph).

Claims 1-8, 10-18, and 20 were rejected under 35 USC 102(e) as being anticipated by U.S. Patent Application Publication US 2004/0061205 to Han et al. (hereinafter "Han"). Claims 9 and 19 were rejected under 35 USC 103(a) as being unpatentable over Han in view of U.S. Patent 6,326,678 to Karnezos et al. These rejections are respectfully traversed.

Han does not teach or suggest a semiconductor package or lead frame having a ground structure including first ground portions connected to tie bars and separate from each other, and a hollow-out area formed between the first ground portion and one of the tie bars. Referring to claim 1, Han does not teach or suggest a first ground portion electrically connected by bonding wires to a chip.

The Han reference discloses a semiconductor package including a lead frame. Referring to FIGS. 3 and 4, as cited in the Office Action, the lead frame 300 includes grounding tabs 302 extending laterally away from a frame paddle 106, and ground leads 306 connected to the frame paddle 106 (see paragraphs 0043-0044). According to paragraph 0044, the ground leads 306 are similar to ground leads 110 (shown in FIG. 1 of Han), which support a bonding ring 104 and the frame paddle 106 (see, e.g., paragraph 0034). As shown in FIG. 3, the ground leads 306 are connected directly to the frame paddle 106 (see paragraph 0044). In Han, a die 108 is connected by ground wires 202 to grounding tabs 302, but **not** to the ground leads 306 (see paragraph 0048).

The ground leads 306 in Han are **not** equivalent to the Applicants' claimed "ground structure." In particular, the ground leads 306 are **not** "connected to the tie bars" as required in claims 1 and 11. Instead, as described in paragraph 0044 of Han, the ground leads 306 are similar to the ground leads 110 in FIG. 1 of Han, and are directly connected to the frame paddle to provide a supporting function (see also paragraph 0034). Therefore, the ground leads 306 in Han serve as tie bars of the lead frame 300. In contrast, claims 1 and 11 recite first ground portions "connected to the tie bars" – where the first ground portions in the Applicants' claimed invention are separate elements that are connected to tie bars.

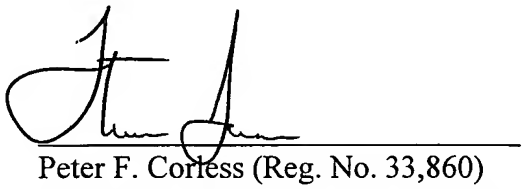
Also, the die 108 is **not** electrically connected to the first ground portion by bonding wires, as recited in claim 1. In Han, ground wires 202 connect the grounding tabs 302 to the die 108, but the ground leads 306 are not electrically connected to the die 108 by bonding wires.

Moreover, Han does **not** teach or suggest a hollow-out area formed between the first ground portion and one of the tie bars, as recited in claims 1 and 11. In Han, box slots 312 on the ground leads 106 have a self-enclosed structure with an open center or slot 314 (see paragraph 0045). However, the Applicants' claimed invention requires a hollow-out area "formed between the first ground portion and one of the tie bars," which is neither taught nor suggested by Han.

For at least the reasons discussed above, the Han reference does not anticipate or otherwise render obvious the Applicants' claimed invention.

It is believed the application is in condition for immediate allowance, which action is earnestly solicited.

Respectfully submitted,



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